

Appl. No. 10/668,916
Amtd. dated April 24, 2006
Reply to final office action of February 24, 2006

REMARKS

This is in response to the final office action mailed on February 24, 2006. The final office action rejected Applicants' Claims 1-18 and 23 as being obvious in view of the combination of U.S. Pat. No. 6,490,519 ("Lapidot"), U.S. Pat. No. 5,696,502 ("Busch"), and U.S. Pat. No. 6,505,114 ("Luciani"). The Office Action allowed Claims 19-22.

With this response, Applicants respectfully request the Examiner to reconsider the present application in view of the following remarks. Applicants submit that all pending claims are in condition for allowance.

Allowed Claims

Applicants appreciate the allowance of Claims 19-22.

Independent Claim 1

Applicants' amended independent Claim 1 relates to a method for developing traffic messages. Claim 1 recites comparing data indicating traffic speed for the [first and second] locations and "if a difference between said compared traffic speed at said first location and said traffic speed at said second location is less than a threshold value, grouping said first and second location assigned said location reference codes into a congestion event." Claim 1 is not obvious in view of the combination of Lapidot, Busch and Luciani because the combination fails to disclose or suggest all of the recited claim elements. Specifically, Lapidot, Busch and Luciani fail to disclose or suggest comparing the traffic speed at the first location to the traffic speed at the second location and grouping into a congestion event if the difference is less than a threshold value.

First, as indicated by page 3 of the Office Action, Lapidot does not disclose the recited grouping of locations. Furthermore, Lapidot does not disclose or suggest comparing the traffic speed at the first location to the traffic speed at the second location. Rather, Lapidot discloses comparing a first location of a vehicle at a first time to a second location at a second time to compute average velocity of the vehicle (distance between locations divided by time elapsed). The computed average velocity between the two locations is used as the velocity of traffic on the road segment on which the vehicle is

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traveling. (*see*, Lapidot: column 12, lines 25-33). Lapidot determines traffic conditions in a completely different manner from the Applicants' recited claim elements. Lapidot compares first and second locations of a vehicle to compute traffic speed between those locations and does not compare first location traffic speed to second location traffic speed to group the locations into a congestion event.

Additionally, Busch does not disclose or suggest the claim elements of comparing the traffic speed at the first location to the traffic speed at the second location to group the locations into a congestion event. In contrast, Busch discloses comparing a speed at a first location to a predetermined speed value and comparing a speed at a second location to a predetermined speed value. (*see*, Busch: column 1, lines 59-62). Busch further discloses computing a speed density difference in which a speed at a first location is compared to a first maximum predetermined speed value and in which a speed at a second location is compared to a second maximum predetermined speed value. The speed density difference is not merely the difference between speed at the first location and speed at the second location; speed density difference is defined by the equation at column 2, lines 30-52 of Busch:

$$\text{sd-D} = \sqrt{\left(\frac{v_i - v_{i+1}}{v_{i+1}}\right)^2 + \left(\frac{k_i - k_{i+1}}{k_{i+1}}\right)^2} - \sqrt{\left(\frac{v_{f1} - v_{f2}}{v_{f2}}\right)^2 + \left(\frac{k_{f1} - k_{f2}}{k_{f2}}\right)^2}$$

where v_f , v_{f+1} are maximum predetermined speed values at the first and second locations, respectively; v_i , v_{i+1} are measured speed at the first and second locations; k_{maxi} , k_{maxi+1} maximum values of traffic density and k_i , k_{i+1} are measured values of traffic density. Busch uses the calculated speed density difference along with calculated trend factor and traffic intensity as feeds to fuzzy logic that determines whether a traffic disruption is present between the first and second locations. (*see*, Busch: column 8, lines 8-12). Busch determines traffic conditions in a completely different manner from the Applicants' recited claim elements. In summary, Busch compares speed at a first location to a first predetermined speed and compares speed at a second locations to a second predetermined speed in a speed density calculation that also considers traffic density which is used as one

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of several variables to determine the presence of a traffic disruption; Busch does not compare first location traffic speed to second location traffic speed to group the locations into a congestion event if the difference is less than a predetermined value.

Moreover, Luciani does not disclose or suggest the claim elements of comparing the traffic speed at the first location to the traffic speed at the second location to group the locations into a congestion event. Luciani discloses calculating an average velocity by comparing a first location of a vehicle at a first time to a second location at a second time (distance between locations divided by time elapsed). Luciani then compares the calculated average velocity to a reference velocity for the road in order to predict traffic intensity on the road. (*see*, Luciani: column 2, lines 29-43). The traffic intensity information may be displayed on a map with roads shown in three colors: green, yellow, red, to signify different states of congestion. (*see*, Luciani: column 7, lines 1-3). Luciani determines traffic conditions in a completely different manner from the Applicants' recited claim elements. Luciani compares first and second locations of a vehicle to compute traffic speed between those locations which is then compared to a reference speed and does not compare first location traffic speed to second location traffic speed to group the locations into a congestion event.

For at least these reasons, Claim 1 is not obvious in view of the combination of Lapidot, Busch and Luciani.

Independent Claim 14

Applicants' amended independent Claim 14 relates to a method for developing traffic messages. Claim 14 recites "comparing data indicating traffic speed at two of said location; if said compared traffic speeds differ by less than a predetermined value, aggregating said location reference codes representing said compared locations." For similar reasons as discussed above in conjunction with Claim 1, Lapidot, Busch and Luciani fail to disclose or suggest the recited claim elements. Accordingly, Claim 14 is not obvious in view of the combination of Lapidot, Busch and Luciani.

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Independent Claim 23

Applicants' amended independent Claim 23 relates to a method for developing traffic messages. Claim 23 recites "comparing data indicating traffic flow at two of said locations; and if said compared traffic flow differ by less than a predetermined value, aggregating said compared locations into at least one congestion event along said road." Claim 23 was rejected as being obvious in view of the combination of Lapidot, Busch and Luciani. For similar reasons as discussed above in conjunction with Claim 1, Lapidot, Busch and Luciani fail to disclose or suggest the recited claim elements. Accordingly, Claim 23 is not obvious in view of the combination of Lapidot, Busch and Luciani.

Applicants' dependent Claims 2-13 and 15-18

Applicants' dependent Claims 2-13 and 15-18 are allowable at least for the reason that they depend upon allowable base claims. In addition, these claims include features that are not disclosed by the cited references.

Conclusion

With the present response, all the issues in the final office action mailed February 24, 2006 have been addressed. Applicant submits that the present application has been placed in condition for allowance. If any issues remain, the Examiner is requested to call the undersigned at the telephone number indicated below.

Respectfully submitted,



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